

REMARKS

Claims 1-66 are present in this application. Claims 1, 4, 32, and 45 are independent claims.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

§ 112, first paragraph, Rejection

Claims 1-66 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 1 and 4 have been amended. Applicant traverses this rejection with regard to claims 32 and 45.

The Office Action states that claims 1, 4, 32, and 45 do not have support for the feature “upon successful decoding.” Applicant notes that this phrase is not recited in claims 32 and 45. Accordingly, Applicant submits that the rejection does not apply to claims 32 and 45.

Claims 1 and 4 have been amended to remove the language alleged as being new matter.

Applicant requests that the rejection be reconsidered and withdrawn based on the claims as amended.

§ 112, second paragraph, Rejection

Claims 1-66 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Office Action states that it is unclear how communication is established upon decoding when communication already exists.

Applicants note that the overall feature “establishes communication with the second communication apparatus” was recited in claims 1 and 4 as filed. To answer the Examiner’s question, Applicants further note that one of ordinary skill in the communications art would understand that communication can involve communication initialization steps. The present specification discloses communication initialization steps leading up to establishing communication of AV data.

In order to expedite prosecution, Applicant has amended claims 1 and 4 to delete the language considered as rendering the claims unclear. Claims 32 and 45 do not recite the phrase “establishes communication,” in which case the rejection does not apply to claims 32 and 45.

Applicant requests that the rejection be reconsidered and withdrawn at least for the reason that claims 1 and 4 have been amended.

§ 103(a) Rejection – Nishimura, Kinoshita

Claims 1-19, 23, 24, 29, 30, 32-38, 45-53, 60-62, 64, and 65 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over US 2004/0068655 (Nishimura) in view of US 2003/0007641 (Kinoshita).

The Examiner maintains the position that “D” constitutes the claimed communication key signal. In particular, in the section “Response to Arguments,” the Examiner states, “the examiner’s interpretation of the communication key signal as D, which is encrypted” (citing the Non-Final Office Action pg. 3). Nishimura discloses “digital data D” as being obtained by converting an electric wave received from satellite into AV data (para. 0148). The digital data D is encrypted using work key Kw, transmitted to the VTR device 2, where it is restored (para. 0155). Thus, Applicant agrees that the digital data D of Nishimura would be subject to encryption.

However, claim 1 recites “an AV data transmitter encrypting an AV data signal including a voice or a picture with a communication key signal.” In other words, the claim requires the communication key signal for encrypting the AV data. Applicant submits that Nishimura’s digital data D is not disclosed for encrypting an AV data signal. Accordingly, Nishimura’s digital data D does not teach the claimed communication key signal.

Subsequently, at least because Nishimura’s digital data is not disclosed as being a key for encrypting an AV data signal, Applicant submits that the Examiner’s position is in error.

Instead, provided that work key Kw of Nishimura is for encrypting the digital data D, the work key Kw may be considered as serving a similar role as the claimed “communication key signal,” per the claimed feature “an AV data transmitter encrypting an AV data signal...with a communication key signal, and transmitting the encrypted AV data signal.”

Furthermore, control key K_c and encrypted work key $K_c(K_w)$ of Nishimura are codes for decrypting the work key ($K_c(K_w)$). Also, work key K_w is for decrypting the encrypted digital data. In particular, Nishimura, at para. 0149, discloses “key restoration means 22 for decrypting the encrypted work key $K_c(K_w)$ using the control key K_c ”, and “decryption means 21 for decrypting the encrypted digital data $K_w(D)$ using the work key K_w restored by the key restoration means 22”.

According to claim 1, “the second communication apparatus generates two or more code signals based on the communication key signal of the second communication apparatus, and transmits all of the code signals to the first communication apparatus using different transfer mediums, respectively, the different transfer mediums being as many as the code signals, and the first communication apparatus decodes the original communication key signal using all of the received code signals.”

Thus, Applicant submits that control key K_c and encrypted work key $K_c(K_w)$ of Nishimura may be considered as the generated two or more code signals based on communication key signal (work key K_w) and used to decode the communication key signal.

However, claim 1 requires that all of the code signals be transmitted using different transfer mediums, the different transfer mediums being as many as the code signals. By the claimed configuration, communication of AV data can only be accomplished with a device that has acquired the two or more code signals via a plurality of respective transfer mediums. By the claimed configuration, risk of tapping of all code signals is removed (see para. 0015 of the specification). Thus, the present invention enables a flexible wireless communication system that removes risk of tapping and prevents random transmission (specification at para. 0018).

Applicant submits that Nishimura fails to teach or suggest transmitting control key K_c and encrypted work key $K_c(K_w)$ using different transfer mediums, the different transfer mediums being as many as the code signals. Furthermore, Applicant submits that Kinoshita fails to make up for this deficiency.

Kinoshita at paras. 0049 and 0050 discloses,

“[0049] In the wireless communication system shown in FIG. 1, the infrared-ray communication section 10 exchanges key data (i.e., link key) with the station 3.

The wireless communication device 1 uses the key data, performing the security process before carrying out data communication with the station 3. The key data is received and transmitted from and to the station 3 by a section other than the section that receives and transmits ordinary data from and to the station 3. In other words, the wireless communication device 1 comprises two communication sections one for exchanging ordinary data with the station 3, and the other for exchanging the key data required in the security process.

[0050] The key data being transmitted can therefore be protected much more reliably than is possible with wireless communication devices that have only a section equivalent to the wireless communication section 20. The key data shared by the wireless communication device 1 and the station 3 increases the effectiveness of the security function. This ultimately enhances the reliability of the data communication between the device 1 and the station 3.”

In other words, Kinoshita discloses that the transfer medium for transferring key information should be different from the transfer medium for transferring data.

To the contrary, claim 1 requires, “two or more code signals” and the second communication apparatus “transmits all of the code signals to the first communication apparatus using different transfer mediums, respectively, the different transfer mediums being as many as the code signals.” Applicant submits that Nishimura and Kinoshita, either alone or in combination, fail to teach or suggest at least these claimed features.

These arguments apply as well to independent claims 4, 32, and 45. For the above reasons, Applicant requests that the rejection be reconsidered and withdrawn.

Further with respect to claims 2 and 16, Applicant submits that Nishimura and Kinoshita, either alone or in combination, fail to teach at least “wherein one of the transfer mediums is a transfer medium used when the AV data signal is transmitted and received.”

Applicant submits that Nishimura and Kinoshita, either alone or in combination, would lead to a configuration in which a transfer medium for transmitting key data is different from the transfer medium for transmitting ordinary data (Kinoshita at para. 0049). Applicant submits that transmitting key data in a different transfer medium from the ordinary data enables the key data to be easily intercepted via a single transfer medium, which results in random communication (see paragraph 0015 in the present specification).

To the contrary, the present invention discourages random communication by transmitting the AV data signal in a transfer medium used for transmitting one of the code signals.

§ 103(a) rejections – Nishimura, Takeda

Claims 20-22, 31, 39, 40, 54, 55, 63, and 66 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishimura and Kinoshita, further in view of US 2003/0182579 (Leporini).

Claims 25, 26, 41, 42, 56 and 57 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishimura in view of U.S. Patent No. 6,512,767 to (Takeda).

Claims 27, 28, 43, 44, 58, and 59 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishimura, Kinoshita, Takeda, further in view of Leporini.

Claims 20-22, 25-28, 31, 39, 40-44, 54-59, 63, and 66 are dependent claims. Applicant submits that at least for the reasons above, the rejection fails to establish *prima facie* obviousness. Therefore, Applicant requests that the rejection be reconsidered and withdrawn.

In addition, Applicant submits that Takeda fails to make up for the deficiency in Nishimura of failing to teach the claimed different transfer mediums, wherein the different transfer mediums are for the two or more code signals.

Rather, Takeda discloses a transmission medium connection device used to connect one type of transmission medium to another type of transmission medium. The present invention, on the other hand, uses a plurality of transfer mediums to transmit, or receive, the two or more data signals.

Claim 27

The Office Action alleges that data transfer means 44 of Fig. 9 of Nishimura teaches the claimed electronic device. (e.g., in the rejection of claim 17). Then, with respect to claim 27, which recites that the electronic device is a remote controller, the Office Action relies on teachings in secondary references to Takeda and Leporini. In the rejection of claim 27, the Office Action appears to rely on Leporini for teaching a capability of receiving inputs from an infer-red

remote control. The Office Action does not address the claimed requirement that the electronic device is a remote controller.

“If the proposed modification or combination of the prior art would change the principal of operation of the prior art invention being modified, then the teaching of the references are not sufficient to render the claims *prima facie* obvious.” *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Based on the feature recited in claim 27, the Office Action’s allegation that the data transfer means 44 is the claimed electronic device and that Leporini teaches a remote control would require replacement of Nishimura’s data transfer device 44 be replaced by a remote controller of Leporini. Replacement of Nishimura’s data transfer means with a remote controller would involve a change in the principal feature of the embodiment, which requires transfer over a single IEEE 1394 bus.

For at least this reason, Applicant submits that the rejection fails to establish *prima facie* obviousness for claim 27. Applicant requests that the rejection of at least claim 27 be reconsidered and withdrawn.

CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact **Robert Downs** Reg. No. 48,222 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

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